

REPLACEMENT SHEET

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FIG. 8A

EYFP-BARR2-Ub

661/221 691/231
CTG CTG GAG TTC GTG ACC GCC GCC GGG ATC ACT CTC GGC ATG GAC GAG CTG TAC AAG TCC
L L E F V T A A G I T L G M D E L Y K S

721/241 751/251
GGA CTC AGA TCT CGA GCT CAA GCT TCG AAT TCT GCA GTC GAC GGT ACC ACG CGC ACC
G L R S R A Q A S K S A V D G T T R T

1/1 31/11
ATG GGT GAA AAA CCC GGG ACC AGG GTC TTC AAG AAG TCG AGC CCT AAC TGC AAG CTC ACC
M G E K P G T R V F K K S S P N C K L T

61/21 91/31
GTG TAC TTG GGC AAG CGT GAC TTT GTG GAT CAC TTG GAC AAA GTG GAT CCT GTC GAT GGT
V Y L G K R D F V D H L D K V D P V D G

121/41 151/51
GTG GTG CTT GTG GAT CCT GAC TAC TTG AAG GAC CGG AAA GTG TTT GTG ACC CTC ACC TGT
V V L V D P D Y L K D R K V F V T L T C

181/61 211/71
GCC TTC CGC TAT GGC CGA GAA GAC CTG GAT GTA CTG GGC CTG TCT TTC CGC AAA GAT CTG
A F R Y G R E D L D V L G L S F R K D L

241/81 271/91
TTC ATC GCC ACC TAC CAG GCC TTC CCC CCC ATG CCC AAC CCA CCT CGG CCC CCC ACC CGC
F I A T Y Q A F P P M P N P P R P P T R

301/101 331/111
CTA CAG GAC CGA CTG CTG AAG AAG TTG GGC CAG CAT GCC CAC CCC TTT TTT TTC ACA ATA
L Q D R L L K K L G Q H A H P F F F T I

361/121 391/131
CCC CAG AAT TTG CCT TGC TCC GTC ACA CTG CAG CCA GGA CCG GAG GAC ACA GGG AAG GCC
P Q N L P C S V T L Q P G P E D T G K A

421/141 451/151
TGT GGA GTA GAC TTT GAG ATT CGA GCC TTC TGT GCC AAA TCT ATA GAA GAA AAA AGC CAC
C G V D F E I R A F C A K S I E E K S H

481/161 511/171
AAA AGG AAC TCC GTG CGG CTT ATC ATC AGA AAG GTA CAG TTT GCT CCT GAG ACA CCC GGC
K R N S V R L I I R K V Q F A P E T P G

541/181 571/191
CCC CAG CCA TCA GCT GAA ACC ACA CGC CAC TTC CTC ATG TCT GAC CGG AGG TCC CTG CAC
P Q P S A E T T R H F L M S D R R S L H

601/201 631/211
CTA GAG GCT TCC CTG GAC AAA GAG CTG TAC TAC CAT GGG GAA CCC CTC AAT GTC AAC GTC
L E A S L D K E L Y Y H G E P L N V N V

661/221 691/231
CAC GTC ACC AAC AAT TCT GCC AAG ACC GTC AAG AAG ATC AGA GTG TCT GTG AGA CAG TAT
H V T N N S A K T V K K I R V S V R Q Y

721/241 751/251
GCC GAC ATT TGC CTC TTC AGC ACC GCG CAG TAC AAG TGT CCT GTG GCT CAG CTT GAA CAA
A D I C L F S T A Q Y K C P V A Q L E Q

781/261 811/271
GAT GAC CAG GTG TCT CCC AGT TCC ACA TTC TGC AAG GTG TAC ACC ATA ACC CCG CTG CTC
D D Q V S P S S T F C K V Y T I T P L L

841/281 871/291
AGT GAC AAC CGA GAG AAG CGT GGC CTT GCC CTT GAT GGG CAA CTC AAG CAC GAA GAC ACC
S D N R E K R G L A L D G Q L K H E D T

901/301 931/311
AAC CTG GCT TCC AGC ACC ATT GTG AAG GAG GGA GCC AAC AAG GAG GTG CTG GGA ATC CTA
N L A S S T I V K E G A N K E V L G I L

961/321 991/331
GTA TCC TAC AGG GTC AAG GTG AAG CTG GTG GTG TCT CCA GGC GGG GAT GTC TCC GTG GAG
V S Y R V K V K L V V S R G G D V S V E

1021/341 1051/351
CTA CCT TTC GTC CTA ATG CAC CCC AAG CCC CAC GAC CAC ATC ACC CTT CCC CGA CCC CAG
L P F V L M H P K P H D H I T L P R P Q

1081/361 1111/371
TCA GCC CCC CGG GAA ATA GAC ATC CCT GTG GAT ACC AAC CTC ATT GAA TTC GAT ACC AAC
S A P R E I D I P V D T N L I E F D T N

1141/381 1171/391
TAT GCC ACA GAC GAC GAC ATC GTG TTT GAG GAC TTT GCG AGG CTT CGG CTG AAG GGG ATG
Y A T D D D I V F E D F A R L R L K G M

1201/401 1231/410

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FIG. 8B

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AAG GAT GAC GAC TGT GAT GAC CAG TTC TGC GTC GAC CAG ATC TTC GTG AAG ACT CTG
K   D   D   D   C   D   D   Q   F   C   V   D   Q   I   F   V   K   T   L
22/8
ACT GGT AAG ACC ATC ACC CTC GAG GTG GAG CCC AGT GAC ACC ATC GAG AAT GTC AAG GCA
T   G   K   T   I   T   L   E   V   E   P   S   D   T   I   E   N   V   K   A
82/28
AAG ATC CAA GAT AAG GAA GGC ATT CCT CCT GAT CAG CAG AGG TTG ATC TTT GCC GGA AAA
K   I   Q   D   K   E   G   I   P   P   D   Q   Q   R   L   I   F   A   G   K
142/48
CAG CTG GAA GAT GGT CGT ACC CTG TCT GAC TAC AAC ATC CAG AAA GAG TCC ACC TTG CAC
Q   L   E   D   G   R   T   L   S   D   Y   N   I   Q   K   E   S   T   L   H
202/68
CTG GTA CTC CGT CTC AGA GGT GGG TGA
L   V   L   R   L   R   G   G   ***

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FIG. 9A

EYFP-BARR2-Ub48

661/221 691/231
CTG CTG GAG TTC GTG ACC GCC GCC GGG ATC ACT CTC GGC ATG GAC GAG CTG TAC AAG TCC
L L E F V T A A G I T L G M D E L Y K S
721/241 751/251
GGA CTC AGA TCT CGA GCT CAA GCT TCG AAT TCT GCA GTC GAC GGT ACC ACG CGC ACC
G L E S R A Q A S K S A V D G T T R T
1/1 31/11
ATG GGT GAA AAA CCC GGG ACC AGG GTC TTC AAG AAG TCG AGC CCT AAC TGC AAG CTC ACC
M G E K P G T R V F K K S S P N C K L T
61/21 91/31
GTG TAC TTG GGC AAG CGT GAC TTT GTG GAT CAC TTG GAC AAA GTG GAT CCT GTC GAT GGT
V Y L G K R D F V D H L D K V D P V D G
121/41 151/51
GTG GTG CTT GTG GAT CCT GAC TAC TTG AAG GAC CGG AAA GTG TTT GTG ACC CTC ACC TGT
V V L V D P D Y L K D R K V F V T L T C
181/61 211/71
GCC TTC CGC TAT GGC CGA GAA GAC CTG GAT GTA CTG GGC CTG TCT TTC CGC AAA GAT CTG
A F R Y G R E D L D V L G L S F R K D L
241/81 271/91
TTC ATC GCC ACC TAC CAG GCC TTC CCC CCC ATG CCC AAC CCA CCT CGG CCC CCC ACC CGC
F I A T Y Q A F P P M P N P P R P P T R
301/101 331/111
CTA CAG GAC CGA CTG CTG AAG AAG TTG GGC CAG CAT GCC CAC CCC TTT TTT TTC ACA ATA
L Q D R L L K K L G Q H A H P F F F T I
361/121 391/131
CCC CAG AAT TTG CCT TGC TCC GTC ACA CTG CAG CCA GGA CCG GAG GAC ACA GGG AAG GCC
P Q N L P C S V T L Q P G P E D T G K A
421/141 451/151
TGT GGA GTA GAC TTT GAG ATT CGA GCC TTC TGT GCC AAA TCT ATA GAA GAA AAA AGC CAC
C G V D F E I R A F C A K S I E E K S H
481/161 511/171
AAA AGG AAC TCC GTG CGG CTT ATC ATC AGA AAG GTA CAG TTT GCT CCT GAG ACA CCC GGC
K R N S V R L I I R K V Q F A P E T P G
541/181 571/191
CCC CAG CCA TCA GCT GAA ACC ACA CGC CAC TTC CTC ATG TCT GAC CGG AGG TCC CTG CAC
P Q P S A E T T R H F L M S D R R S L H
601/201 631/211
CTA GAG GCT TCC CTG GAC AAA GAG CTG TAC TAC CAT GGG GAA CCC CTC AAT GTC AAC GTC
L E A S L D K E L Y Y H G E P L N V N V
661/221 691/231
CAC GTC ACC AAC AAT TCT GCC AAG ACC GTC AAG AAG ATC AGA GTG TCT GTG AGA CAG TAT
H V T N N S A K T V K K I R V S V R Q Y
721/241 751/251
GCC GAC ATT TGC CTC TTC AGC ACC GCG CAG TAC AAG TGT CCT GTG GCT CAG CTT GAA CAA
A D I C L F S T A Q Y K C P V A Q L E Q
781/261 811/271
GAT GAC CAG GTG TCT CCC AGT TCC ACA TTC TGC AAG GTG TAC ACC ATA ACC CCG CTG CTC
D D Q V S P S S T F C K V Y T I T P L L
841/281 871/291
AGT GAC AAC CGA GAG AAG CGT GGC CTT GCC CTT GAT GGG CAA CTC AAG CAC GAA GAC ACC
S D N R E K R G L A L D G Q L K H E D T
901/301 931/311
AAC CTG GCT TCC AGC ACC ATT GTG AAG CAG GGA GCC AAC AAG GAG GTG CTG GGA ATC CTA
N L A S S T I V K E G A N K E V L G I L
961/321 991/331
GTA TCC TAC AGG GTC AAG GTG AAG CTG GTG GTG TCT CGA GGC GGG GAT GTC TCC GTG GAG
V S Y R V K V K L V V S R G G D V S V E
1021/341 1051/351
CTA CCT TTC GTC CTA ATG CAC CCC AAG CCC CAC GAC CAC ATC ACC CTT CCC CGA CCC CAG
L P F V L M H P K P H D H I T L P R P Q
1081/361 1111/371
TCA GCC CCC CGG GAA ATA GAC ATC CCT GTG GAT ACC AAC CTC ATT GAA TTC GAT ACC AAC
S A P R E I D I P V D T N L I E F D T N
1141/381 1171/391
TAT GCC ACA GAC GAC GAC ATC GTG TTT GAG GAC TTT GCG AGG CTT CGG CTG AAG GGG ATG
Y A T D D D I V F E D F A R L R L K G M
1201/401 1231/410

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FIG. 9B

AAG GAT GAC GAC TGT GAT GAC CAG TTC TGC GTC GAC CAG ATT TTC GTC AAG ACT TTG
K D D D C D D Q F C V D Q I F V K T L
22/8 52/18
ACC GGT AAA ACC ATA ACA TTG GAA GTT GAA TCT TCC GAT ACC ATC GAC AAC GTT AAG TCG
T G K T I T L E V E S S D T I E N V K S
82/28 112/38
AAA ATT CAA GAC AAG GAA GGT ATC CCT CCA GAT CAA CAA AGA TTG ATC TTT GCC GGT AGG
K I Q D K E G I P P D Q Q R L I F A G R
142/48 172/58
CAG CTA GAA GAC GGT AGA ACG CTG TCT GAT TAC AAC ATT CAG AAG GAG TCC ACC TTA CAT
Q L E D G R T L S D Y N I Q K E S T L H
202/68
CTT GTG CTA AGG CTA AGA GGT GGT TGA
L V L R L R G G ***

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FIG. 10A

EGFP-BARR2-Ub48

661/221 691/231
CTG CTG GAG TTC GTG ACC GCC GCC GGG ATC ACT CTC GGC ATG GAC GAG CTG TAC AAG TCC
L L E F V T A A G I T L G M D E L Y K S
721/241 751/251
GGA CTC AGA TCT CGA GCT CAA GCT TCG AAT TCT GCA GTC GAC GGT ACC ACG CGC ACC
G L R S R A Q A S K S A V D G T T R T
1/1 31/11
ATG GGT GAA AAA CCC GGG ACC AGG GTC TTC AAG AAG TCG AGC CCT AAC TGC AAG CTC ACC
M G E K P G T R V F K K S S P N C K L T
61/21 91/31
GTG TAC TTG GGC AAG CGT GAC TTT GTG GAT CAC TTG GAC AAA GTG GAT CCT GTC GAT GGT
V Y L G K R D F V D H L D K V D P V D G
121/41 151/51
GTG GTG CTT GTG GAT CCT GAC TAC TTG AAG GAC CGG AAA GTG TTT GTG ACC CTC ACC TGT
V V L V D P D Y L K D R K V F V T L T C
181/61 211/71
GCC TTC CGC TAT GGC CGA GAA GAC CTG GAT GTA CTG GGC CTG TCT TTC CGC AAA GAT CTG
A F R Y G R E D L D V L G L S F R K D L
241/81 271/91
TTC ATC GCC ACC TAC CAG GCC TTC CCC CCC ATG CCC AAC CCA CCT CGG CCC CCC ACC CGC
F I A T Y Q A F P P M P N P P R P P T R
301/101 331/111
CTA CAG GAC CGA CTG CTG AAG AAG TTG GGC CAG CAT GCC CAC CCC TTT TTT TTC ACA ATA
L Q D R L L K K L G Q H A H P F F F T I
361/121 391/131
CCC CAG AAT TTG CCT TGC TCC GTC ACA CTG CAG CCA GGA CCG GAG GAC ACA GGG AAG GCC
P Q N L P C S V T L Q P G P E D T G K A
421/141 451/151
TGT GGA GTA GAC TTT GAG ATT CGA GCC TTC TGT GCC AAA TCT ATA GAA GAA AAA AGC CAC
C G V D F E I R A F C A K S I E E K S H
481/161 511/171
AAA AGG AAC TCC GTG CGG CTT ATC ATC AGA AAG GTA CAG TTT GCT CCT GAG ACA CCC GGC
K R N S V R L I I R K V Q F A P E T P G
541/181 571/191
CCC CAG CCA TCA GCT GAA ACC ACA CGC CAC TTC CTC ATG TCT GAC CGG AGG TCC CTG CAC
P Q P S A E T T R H F L M S D R R S L H
601/201 631/211
CTA GAG GCT TCC CTG GAC AAA GAG CTG TAC TAC CAT GGG GAA CCC CTC AAT GTC AAC GTC
L E A S L D K E L Y Y H G E P L N V N V
661/221 691/231
CAC GTC ACC AAC AAT TCT GCC AAG ACC GTC AAG AAG ATC AGA GTG TCT GTG AGA CAG TAT
H V T N N S A K T V K K I R V S V R Q Y
721/241 751/251
GCC GAC ATT TGC CTC TTC AGC ACC GCG CAG TAC AAG TGT CCT GTG GCT CAG CTT GAA CAA
A D I C L F S T A Q Y K C P V A Q L E Q
781/261 811/271
GAT GAC CAG GTG TCT CCC AGT TCC ACA TTC TGC AAG GTG TAC ACC ATA ACC CCG CTG CTC
D D Q V S P S S T F C K V Y T I T P L L
841/281 871/291
AGT GAC AAC CGA GAG AAG CGT GGC CTT GCC CTT GAT GGG CAA CTC AAG CAC GAA GAC ACC
S D N R E K R G L A L D G Q L K H E D T
901/301 931/311
AAC CTG GCT TCC AGC ACC ATT GTG AAG GAG GGA GCC AAC AAG GAG GTG CTG GGA ATC CTA
N L A S S T I V K E G A N K E V L G I L
961/321 991/331
GTA TCC TAC AGG GTC AAG GTG AAG CTG GTG GTG TCT CGA GGC GGG GAT GTC TCC GTG GAG
V S Y R V K V K L V V S R G G D V S V E
1021/341 1051/351
CTA CCT TTC GTC CTA ATG CAC CCC AAG CCC CAC GAC CAC ATC ACC CTT CCC CGA CCC CAG
L P F V L M H P K P H D H I T L P R P Q
1081/361 1111/371
TCA GCC CCC CGG GAA ATA GAC ATC CCT GTG GAT ACC AAC CTC ATT GAA TTC GAT ACC AAC
S A P R E I D I P V D T N L I E F D T N
1141/381 1171/391
TAT GCC ACA GAC GAC GAC ATC GTG TTT GAG GAC TTT GCG AGG CTT CGG CTG AAG GGG ATG
Y A T D D D I V F E D F A R L R L K G M
1201/401 1231/410

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FIG. 10B

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AAG GAT GAC GAC TGT GAT GAC CAG TTC TGC GTC GAC CAG ATC TTC GTG AAG ACT CTG
K D D D C D D Q F C V D Q I F V K T L
22/8
ACT GGT AAG ACC ATC ACC CTC GAG GTG GAG CCC AGT GAC ACC ATC GAG AAT GTC AAG GCA
T G K T I T L E V E P S D T I E N V K A
82/28
AAG ATC CAA GAT AAG GAA GGC ATT CCT CCT GAT CAG CAG AGG TTG ATC TTT GCC GGA AGA
K I Q D K E G I P P D Q Q R L I F A G R
142/48
CAG CTG GAA GAT GGT CGT ACC CTG TCT GAC TAC AAC ATC CAG AAA GAG TCC ACC TTG CAC
Q L E D G R T L S D Y N I Q K E S T L H
202/68
CTG GTA CTC CGT CTC AGA GGT GGG TGA
L V L R L R G G ***

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FIG. 11A Human G Protein Coupled Receptor Family
(Receptors known as of January, 1999)

CLASS	LIGAND	NUMBER	TISSUE	PHYSIOLOGY	THERAPEUTICS
•Class I Rhodopsin like	•Amine				
	•Acetylcholine (muscarinic & nicotinic)	5	Brain, Nerves, Heart	Neurotransmitter	Acuity, Alzheimer's
	•Adrenoceptors				
	•Alpha Adrenoceptors	6	Brain, Kidney, Lung	Gluconeogenesis	Diabetes, Cardiovascular
	•Beta Adrenoceptors	3	Kidney, Heart	Muscle Contraction	Cardiovascular, Respiratory
	•Dopamine	5	Brain, Kidney, GI	Neurotransmitter	Cardiovascular, Parkinson's
	•Histamine	2	Vascular, Heart, Brain	Vascular Permeability	Anti-inflammatory, Ulcers
	•Serotonin (5-HT)	16	Most Tissues	Neurotransmitter	Depression, Insomnia, Analgesic
	•Peptide				
	•Angiotensin	2	Vascular, Liver, Kidney	Vasoconstriction	Cardiovascular, Endocrine
	•Bradykinin	1	Liver, Blood	Vasodilation,	Anti-inflammatory, Asthma
	•C5a anaphylatoxin	1	Blood	Immune System	Anti-inflammatory
	•Fmet-leu-phe	3	Blood	Chemoattractant	Anti-inflammatory
	•Interleukin-3	1	Blood	Chemoattractant	Anti-inflammatory
	•Chemokine	6	Blood	Chemoattractant	Anti-inflammatory
	•Orexin	2	Brain	Fat Metabolism	Obesity
	•Nociceptin	1	Brain	Bronchodilator, Pain	Airway Diseases, Anesthetic
	•CCK (Gastrin)	2	Gastrointestinal	Motility, Fat Absorption	Gastrointestinal, Obesity, Parkinson's
	•Endothelin	2	Heart, Bronchus, Brain	Muscle Contraction	Cardiovascular, Respiratory
	•Melanocortin	5	Kidney, Brain	Metabolic Regulation	Anti-inflammatory, Analgesics
	•Neuropeptide Y	5	Nerves, Intestine, Blood	Neurotransmitter	Behavior, Memory, Cardio-vascular
	•Neurotensin	1	Brain,	CNS	Cardiovascular, Analgesic

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FIG. 11B

·Opioid	3	Brain,	CNS	Depression, Analgesic
·Somatostatin	5	Brain, Gastrointestinal	Neurotransmitter	Oncology, Alzheimer's
·Tachykinin	3	Brain Nerves	Neurohormone	Depression, Analgesic
(Substance P, NK ₁)	3	Platelets, Blood Vessels	Coagulation	Anti-coagulant, Anti-inflammatory
·Thrombin	4	Arteries, Heart, Bladder	Water Balance	Anti-diuretic, Diabetic Complications
·Vasopressin-like	1	Brain, Pancreas	Neurotransmitter	Analgesics, Alzheimer's
·Galanin	1	Ovary, Testis	Endocrine	Infertility
·Hormone protein	1	Ovary, Testis	Endocrine	Infertility
·Follicle stimulating hormone	1	Thyroid	Endocrine	Thyroidism, Metabolism
·Lutropin-choriogonadotropic	5	Eye	Photoreception	Ophthalmic Diseases
·Thyrotropin	4(~1000)	Nose	Smell	Olfactory Diseases
·(Rhod)opsin	5	Arterial, Gastrointestinal	Vasodilation, Pain	Cardiovascular, Analgesic
·Opsin	2	Vessels, Heart, Lung	Inflammation	Cancer, Anti-Inflammatory
·Olfactory	2	Most Cells	Cell proliferation	Cancer
·Prostanoid	1	White Blood Cells, Bronchus	Inflammation	Asthma, Rheumatoid Arthritis
·Prostaglandin	1	Arterial, Gastrointestinal	Platelet Regulation	Cardiovascular
·Lysophosphatidic Acid	1	Arterial, Bronchus	Vasoconstriction	Cardiovascular, Respiratory
·Sphingosine-1-phosphate	4	Vascular, Bronchus	Multiple Effects	Cardiovascular, Respiratory
·Leukotriene	4	Vascular, Platelets	Relaxes Muscle	Cardiovascular, Respiratory
·Prostacyclin	2	Brain	Sensory Perception	Analgesics, Memory
·Thromboxane	1	Most Peripheral Tissues	Inflammation	Anti-inflammatory, Anti-asthmatic
·Nucleotide-like				
·Adenosine				
·Purinocceptors				
·Cannabis				
·Platelet activating factor				

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FIG. 11C

•Gonadotropin-releasing hormone like				Prostate Cancer, Endometriosis Metabolic Regulation Oncology, Alzheimer's Regulation of Circadian Cycle
•Gonadotropin-releasing hormone	1	Reproductive Organs, Pituitary	Reproduction	
•Thyrotropin-releasing hormone	1	Pituitary, Brain	Thyroid Regulation	
•Growth hormone- inhibiting factor	1	Gastrointestinal	Neuroendocrine	
•Melatonin	1	Brain, Eye, Pituitary	Neuroendocrine	
•Class II Secretin like				
•Secretin	1	Gastrointestinal, Heart	Digestion	Obesity, Gastrointestinal Osteoporosis
•Calcitonin	1	Bone, Brain	Calcium Resorption	
•Corticotropin releasing factor/urocortin	1	Adrenal, Vascular, Brain	Neuroendocrine	Stress, Mood, Obesity
•Gastric inhibitory peptide (GIP)	1	Adrenals, Fat Cells	Sugar/Fat Metabolism	
•Glucagon	1	Liver, Fat Cells, Heart	Gluconeogenesis	Diabetes, Obesity Cardiovascular
•Glucagon-like Peptide 1 (GLP-1)	1	Pancreas, Stomach, Lung	Gluconeogenesis	
•Growth hormone-releasing hormone		Brain	Neuroendocrine	Cardiovascular, Diabetes, Obesity Growth Regulation
•Parathyroid hormone	1	Bone, Kidney	Calcium Regulation	
•PACAP	1	Brain, Pancreas, Adrenals	Metabolism	Osteoporosis Metabolic Regulation
•Vasoactive intestinal polypeptide (VIP)	1	Gastrointestinal	Motility	
•Metabotropic Glutamate	7	Brain	Sensory Perception	Gastrointestinal Hearing, Vision Mood Disorders Cataracts, GI Tumors
•GABA _B	1	Brain	Neurotransmitter	
•Extracellular Calcium Sensing	1	Parathyroid, Kidney, GI Tract	Calcium Regulation	
•Class III				

FIG. 11D

G protein-coupled receptors:
(Division into Class A
Or Class B)

1. **A1 adenosine receptor** [Homo sapiens]. **ACCESSION AAB25533**
npivyaf riqkfrvtfl kiwndhfrq pappidedlp eerpdd
Class A
2. **adrenergic, alpha -1B-, receptor** [Homo sapiens]. **ACCESSION NP_000670**
npiypcsskefkrafvrlgcqcrgrrrrrrrrrlggcaytyrpwtrggslersqsrkdslddsgscslsgsqrtilpsaspspgylgr
gappvelcafpewkapgallslpapeppgrrgrhdsqplftfklltepespgtdggasnggceaaadvangqpgfksnmpla
pgqf
Class A
3. **adrenergic receptor alpha-2A** [Homo sapiens]. **ACCESSION AAG00447**
npviytifnhdfrfakkilcrgdrkriv
Class A
4. **alpha-2B-adrenergic receptor - human**. **ACCESSION A37223**
npviytifnqdfrrafrilcrpwtqtaw
Class A
5. **alpha-2C-adrenergic receptor - human**. **ACCESSION A31237**
npviytfvfnqdfpsfkhlfrrrrgfrq
Class A
6. **beta-1-adrenergic receptor** [Homo sapiens]. **ACCESSION NP_000675**
npiiyrcspdfrikafqglccarraarrhathgdrprasgclarpqpppsgaasddddddvvgatpparllpewagcnggaa
adss sldepcrpgfaseskv
Class A
7. **beta-2 adrenergic receptor**. **ACCESSION P07550**
npliyrcspdfriaqfcllrrsslkayngyssngntgeqsgyhveqekenllcedlpgtedfvghqgtvpsdnidsqgrncs
tndsl
Class A
8. **dopamine receptor D1** [Homo sapiens]. **ACCESSION NP_000785**
npiiyafnadfrkafstllgcyrlepatnnaletvsinnngaamfsshheprgsiskecnlyliphavgssedlkkeeaagiapl
eklspalsvildytdvslekiqpitqngqhpt
Class A
9. **D(2) dopamine receptor**. **ACCESSION P14416**
npiiyttfniefrikafkilh
Class A

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10/543,122

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FIG. 11E

10. **d3 dopamine receptor** - human. ACCESSION G01977
npviyttfniefkrakflkisc
Class A
11. **dopamine receptor D4** - human. ACCESSION DYHUD4
npviytfvnaefrnfvrkalracc
Class A
12. **dopamine receptor D5** - human. ACCESSION DYHUD5
npviyafnadfqkvfaqllgcshfcsrtpvctvnisnelisynqdivfhkeiaaayihmmpnavtpgnrevdndeeegpfdm
fqiyqtspdgdpvaesvwelcdcegisldkitpftpngfh
Class A
13. **muscarinic acetylcholine receptor M1** [Homo sapiens]. ACCESSION NP_000729
nrmcyalcnkaftrdtfrlllcrwdkrrwrkipkrpgsvhrtpsrqc
Class A
14. **muscarinic acetylcholine receptor M2** [Homo sapiens]. ACCESSION NP_000730
npacyalcnatfkktkfhllmchyknigatr
Class A
15. **muscarinic acetylcholine receptor M3** [Homo sapiens].
npvcyalcnktrfttkmlllcqcdkkrkqyqqrqsvifhkrapeqal
Class A
16. **muscarinic acetylcholine receptor M4** [Homo sapiens]. ACCESSION NP_000732
npacyalcnatfkktkfhlhcqymnigtar
Class A
17. **m5 muscarinic receptor**. locus HUMACHRM ACCESSION AAA51569
npicyalcnrtrfktfkmlllcrwkkkkveeklywqgnsklp
Class A
18. **5-hydroxytryptamine (serotonin) receptor 1A** [Homo sapiens]. ACCESSION
BAA90449
npviyayfnkdfqnafkikiickf
Class A
19. **5-hydroxytryptamine (serotonin) receptor 1B** [Homo sapiens]. ACCESSION
BAA94455
npiiytmsnedfkqafhklirfkets
Class A

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FIG. 11F

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20. **5-hydroxytryptamine (serotonin) receptor 1E** [Homo sapiens]. ACCESSION BAA94458
npilytsfndfklafkkllrcr
Class A
21. **OLFACTORY RECEPTOR 6A1**. ACCESSION O95222
npiiyclrnqevkralccilhlyqhdpdpkkgssrnv
Class A
22. **OLFACTORY RECEPTOR 2C1**. ACCESSION O95371
npilytlrnmevkgalrrllgkgrevg
Class A
23. **angiotensin receptor 1** [Homo sapiens]. ACCESSION NP_033611
nplfygflgkfkryflqllkyippkakshsnlsfkmstlsyrpsdnvssstkkpapcfve
Class B
24. **angiotensin receptor 2** [Homo sapiens]. ACCESSION NP_000677
npflycfvgnrffqqlrsvfrvpitwlqgkresmscrkssslremetfvs
Class B
25. **interleukin 8 receptor beta (CXCR2)** [Homo sapiens]. ACCESSION NM_001557
NPLIYAFIGQKFRHGLLKILAIHGLISKDSLPKDSRPSFVGSSSGHTSTTL
Class B
26. **cx3c chemokine receptor 1 (cx3cr1)** (fractalkine receptor)
ACCESSION P49238
npliyafagekfrylyhlygkclavlcgrsvhvdffssesqsrhgsvglssnftyhtsdgdallll
Class B
27. **neurotensin receptor - human**. ACCESSION S29506
n pilynlvsanfrhiflatlaclepvwrrrrkrpafsrkadvssnhtlssnatretly
Class B
28. **SUBSTANCE-P RECEPTOR (SPR) (NK-1 RECEPTOR) (NK-1R)**. ACCESSION P25103
npiiyccldndrflgfkhafrccpfisagdyeglemkstrylqtqgsvykvsrletfistfvvgaheepedgpkatpssldltsncssrsdskt
ntesfsfsnvl
Class B
29. **vasopressin receptor type 2** [Homo sapiens]. ACCESSION AAD16444
npwiyasfsssvsselsllccargtrtpslgpqdescftassslakdtss
Class B
30. **thyrotropin-releasing hormone receptor - human**. ACCESSION JN0708
npviynlmsqkfraafklcnckqkptekpanysvalnysvikesdhfsteldditvtdtylsafkvsfddtclasevsfsqs
Class B

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FIG. 11G

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31. **oxytocin receptor - human.** ACCESSION A55493
npwiymllftghlfhelvqrfllccsasyllkgrrlgetsaskksnsssfvlshrsssqrcsqpsta
Class B
32. **neuromedin U receptor 1 [Homo sapiens].** ACCESSION AAG24793
npvlyslmssrfretfqealcigacchrlprhsshslsrmmttgstlcdvgslgswvhplagndgpeaqgetdps
Class B
33. **gastrin receptor.** ACCESSION AAC37528
nplvyvcmhrrfrqacletcarccprpprarpralpdedpptsiaslsrlyttistlgpg
Class B
34. **galanin receptor 3 [Homo sapiens].** ACCESSION 10879541
nplvyalasrhfrarfrlwpccgrrrrhrraralrrvpasggppgpcgdarpsgrllagggqgpepregpvhggeaargpe
Class A
35. **edg-1 - human.** ACCESSION A35300
npiiytltnkemrrafirimsceckcpgdsagkfrpiiagmefsrsksdnsshpqkdegdnpetimssgnvnss
Class A
36. **central cannabinoid receptor [Homo sapiens].** ACCESSION NP_057167
npiiyalrskdlrhafirmsfpcgtaqpldnsmgdsdclhkhannaasvhraaescikstvkiakvtmsvstdtsaeal
Class A
37. **delta opioid receptor - human.** ACCESSION I38532
npvlyafldenfkrcfrqlcrkpcgrdpssfsrpreatarervtactpsdggpggraa
Class A
38. **proteinase activated receptor 2 (PAR-2) human.** ACCESSION P55085
dpfvyyfvshdfrdhaknallcrsvrtvkqmqltskkhsrksssysssttvktsy
Class B
39. **vasopressive intestinal peptide receptor (VIPR) rat.** ACCESSION NM_012685
NGEVQAELRRKWRRWHLQGVLGWSSKSQHPWGGSNATCSTQVSMLTRVSPSA
RRSSSFQAEVSLV
Class B